

Title

Soilproofing, fire-resistant, and translucent sheets coated with fluoropolymer layers and their manufacture

Inventor Name

Seki, Masao

Patent Assignee

Toray Industries, Inc., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN

JKXXAF

Patent Information

JP 09226064 A2 970902 Heisei

Application Information

JP 96-36291 960223

Abstract

Sheets useful for tents, automobile hoods, construction materials, and greenhouses are coated with 20-2000 .ANG.-thick fluoropolymer films at .gtoreq.1 side. The sheets are manufd. by low-temp. plasma polymn. on polymer sheets in the presence of F-contg. monomers to form 20-2000 .ANG.-thick thin film layers. Thus, a water-repellent poly(ethylene terephthalate) fabric [total light transmittance (T) 56%] was sandwiched between poly(vinyl chloride) sheets (d.p. 1000) contg. plasticizers, Sb₂O₃, TiO₂, a UV absorber, and stabilizers and plasma-treated with C4F₈ to give a sheet which was coated with 15 .ANG.-thick polymer layers and showed T 48%, good soilproofing properties, and fire resistance, and the sheet was used as a roofing material for tennis courts.

International Patent Classification

International Patent Classification, Main

B32B027-00

International Patent Classification, Secondary

B32B027-12; B32B027-16; B32B027-30

Document Type

Patent

Language

Japanese

Supplementary Indexing

soilproofing sheet fluoropolymer coating plasma polymn; PVC sheet antisoiling coating fluoropolymer; tent roof soilproofing polyvinyl chloride sheet; automobile hood antisoiling sheet fluoropolymer coating; construction material soilproofing fluoropolymer; greenhouse

Title

Coating compositions for vinyl chloride polymer moldings and their coating method

Inventor Name

Nishimatsu, Tadao; Terada, Saburo

Patent Assignee

Honey Kasei Kk, Japan; Hirono Kagaku Kogyo

Publication Source

Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN

JKXXAF

Patent Information

JP 07316486 A2 951205 Heisei

Application Information

JP 94-137825 940530

Abstract

The title compns., useful for applying on vinyl chloride polymer moldings primed with acrylic polymers or their mixts. with vinyl chloride polymers, comprise (A) soft fluoropolymers comprising fluoro rubbers and vinylidene fluoride polymers and (B) copolymers of monomers having quaternary ammonium halide groups $N+R_1R_2R_3.Y-$ (R_1-3 = alkyl; Y = halogen) and alpha., beta.-ethylenically unsatd. groups $CH_2.CR_4$ (R_4 = H, Me) and other unsatd. monomers. Thus, a soft poly(vinyl chloride) sheet was primed with a primer contg. Denka Vinyl M 70 50, Dianal BR 85 25 and MEK 25 parts and finished with a compn. contg. 50 parts Cefral Soft G 180 and 25 parts DQ 100 (2-methacryloyloxyethyltrimethylammonium chloride)-Me methacrylate copolymer to give a test piece showing good adhesion and weather resistance.

International Patent Classification

International Patent Classification, Main

C09D127-16

International Patent Classification, Secondary

C08J007-04; C09D139-02

Document Type

Patent

Language

Japanese

Supplementary Indexing

fluoropolymer blend acrylic polymer coating; polyvinyl chloride molding fluoropolymer coating; quaternary ammonium acrylic polymer coating; weather resistance coating
fluoropolymer

IT Related Fields

Indexing

Concept Group

Title

Coated thermoplastic resin sheets and the coating compositions

Inventor Name

Miura, Ryuichi; Yoneyama, Teru; Takayanagi, Takashi

Patent Assignee

Asahi Glass Co Ltd, Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN

JKXXAF

Patent Information

JP 06073330 A2 940315 Heisei

Application Information

JP 92-266691 920909

Priority Application Information

JP 92-190088 920624

Abstract

The resin sheets are coated with compns. consisting of (1) carboxyl group-contg. fluoropolymers with acid value 10-150 mg KOH/g, (2) carboxyl group-contg. acrylic polymers which are compatible with the fluoropolymers and have acid value 10-150 mg KOH/g, and (3) 0.1-30 phr Al chelates. A soft poly(vinyl chloride) sheet was coated with a compn. contg. (1) 50 parts of a hexahydrophthalic anhydride-modified 39.4:48.1:12.5 copolymer of Bu vinyl ether, tetrafluoroethylene and omega.-hydroxybutyl vinyl ether, (2) 50 parts of a 6:2:2 copolymer of iso-Bu methacrylate, Bu methacrylate and methacrylic acid, and (3) 20 parts Alumichelate D. The coating was storage-stable and had good adhesion, weather resistance, blocking resistance and weldability.

International Patent Classification

International Patent Classification, Main

C09D133-16

International Patent Classification, Secondary

C09D133-16; C08J007-04; C09D127-12

Document Type

Patent

Language

Japanese

Supplementary Indexing

thermoplastic resin sheet coating; fluoropolymer acrylic polymer coating; aluminum chelate coating thermoplastic

Title

Manufacture of aqueous dispersions of fluorine-containing polymers for oil- and water-repellent coatings

Inventor Name

Ito, Katsuji; Kamata, Takashi

Patent Assignee

Asahi Glass Co Ltd, Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN

JKXXAF

Patent Information

JP 06287548 A2 941011 Heisei

Application Information

JP 93-100491 930402

Abstract

The title dispersions are prep'd. by emulsion polymn. of fluoroalkyl group-contg. unsatd. monomers and other monomers using a persulfate as the initiator and a polyoxyalkylene monoalkyl ether as the emulsifier. A mixt. of H₂C:CHCO₂CH₂CH₂R [R = C₉ (av.) perfluoroalkyl] 60, stearyl acrylate 36, and 2-hydroxyethyl acrylate 4 parts was polymd. in the presence of K₂S₂O₈ in water contg. polyethylene glycol mono-sec-dodecyl ether at 60° to give an emulsion which was dild. with H₂O to 1.5% solids and applied to nylon fabric to give water repellency (JIS L1092) 100.

International Patent Classification

International Patent Classification, Main

C09K003-18

International Patent Classification, Secondary

C08F002-30; C08F220-22; D06M013-17; D06M015-277

Document Type

Patent

Language

Japanese

Supplementary Indexing

fluoroalkyl acrylate copolymer oilproofing waterproofing; waterproofing fluoroalkyl acrylate copolymer dispersion; oilproofing fluoroalkyl acrylate copolymer dispersion; ethoxylate dispersant fluoroalkyl acrylate copolymer; hydroxyethyl acrylate fluoropolymer dispersion; stearyl acrylate fluoropolymer dispersion; nylon fabric oilproofing waterproofing fluoropolymer

IT Related Fields

Title

Coated poly(vinyl chloride) sheets and manufacture thereof

Inventor Name

Sudo, Hiroshi; Tanaka, Kotaro; Hara, Yasuo

Patent Assignee

Sato Kogyo, Japan; Ogawa Tent Co Ltd; Japan Synthetic Rubber Co Ltd

Publication Source

Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN

JKXXAF

Patent Information

JP 07039812 A2 950210 Heisei

Application Information

JP 93-210982 930802

Abstract

Sheets are coated with primers such as PMMA and topcoated with fluororesins.

International Patent Classification

International Patent Classification, Main

B05D007-04

International Patent Classification, Secondary

B05D007-24; E04H015-54

Document Type

Patent

Language

Japanese

Supplementary Indexing

PMMA fluororesin coating PVC

IT Related Fields

Indexing

Concept Group

Concept Heading

Coating materials

Text Modification

(PVC sheets primed with PMMA and coated with fluororesins)

IT Related Fields

Indexing

Concept Group

Concept Heading

Soiling-resistant coated fabrics for building construction

Inventor Name

Kamya, Kuniaki

Patent Assignee

Kyoowa Kk, Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN

JKXXAF

Patent Information

JP 07004064 A2 950110 Heisei

Application Information

JP 93-180581 930616

Abstract

The title fabrics are prep'd. by coating fabrics of vinyl chloride polymer paste-coated yarns with compns. comprising polymers contg. fluoroolefin units 25-75, fatty acid vinyl ester or fatty acid isopropenyl ester units 10-70, hydroxyallyl ether units 3-40, carboxy group-contg. monomer units 0.1-20, and other monomer units 0-10 mol% and crosslinking agents to give fabrics with coating wt. 1-10 g/m². Polyester multifilament yarns were coated with a paste sol contg. PVC, made into a woven fabric, heat treated 60 s at 150°, immersed in a soln. contg. a mixt. of 75 parts 50% chlorotrifluoroethylene-ethylene glycol monoallyl ether-vinyl acetate copolymer soln. and 25 parts blocked polyisocyanate, squeezed to solids content 3 g/m², and heat treated 30 s at 120° and 1 min at 150°, and wound to give a coated fabric with soiling rating (5 very low soiling, 1 very high soiling) 3 after using the sheet for 4 mo.

International Patent Classification

International Patent Classification, Main

E04G021-32

International Patent Classification, Secondary

D03D015-00; D06M015-347

Document Type

Patent

Language

Japanese

Accession Number

1995:470298

Reference Number

122:216467

CAplus Answer Number 56 - © 1997 ACS

Title

Fluoroolefin polymer coatings for vinyl chloride resin moldings to prevent plasticizer migration

Inventor Name

Wada, Susumu; Mori, Haruhiko; Shimizu, Yoshiki; Senda, Akira

Patent Assignee

Daikin Ind Ltd, Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN

JKXXAF

Patent Information

JP 05163456 A2 930629 Heisei

Application Information

JP 91-331825 911216

Abstract

Title coatings contain hardeners and polymers prep'd. from CF₂:CFX (X = F, Cl, H, CF₃), CH₂:CR(CH₃) (R = C₁₋₈ alkyl), CH₂:CHR₁ (R₁ = OR₂ or CH₂OR₂, R₂ = OH-contg. alkyl), and other monomers. A compn. contg. Takenate D 140 M, and C₂ClF₃-isobutylene-4-hydroxybutyl vinyl ether-vinyl pivalate copolymer was applied on a vinyl chloride resin plate to form a plate with good corrosion, chem., soil, and weather resistance.

International Patent Classification

International Patent Classification, Main

C09D127-12

International Patent Classification, Secondary

C08F214-18; C09D127-12

Document Type

Patent

Language

Japanese

Supplementary Indexing

fluoro olefin polymer coating PVC; plasticizer migration preventive fluoro coating PVC

IT Related Fields

Indexing

Concept Group

Concept Heading

Fluoropolymers

Title

End group-modified fluoroalkylepoxyalkane polymers and their uses as surface property modifiers

Inventor Name

Shinjo, Masayoshi; Hayashi, Kazunori

Patent Assignee

Daikin Industries, Ltd., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN

JKXXAF

Patent Information

JP 63248827 A2 881017 Showa

Application Information

JP 87-83182 870403

Abstract

The title polymers, useful as water and oil repellents for fibers and non-fibers, adhesion preventers (mold, internal, adhesive releases), and soiling preventers, are (co)polymers of epoxy compds. I ($R_f = C_3\text{-}C_{21}$ fluoroalkyl; $p = 1\text{-}10$) with no.-av. mol. wt. 2000-50,000, and their terminal OH or COOH groups are modified by acylation or alkoxylation. A copolymer was prep'd. from 9.67 g I ($R_f = (CF_3)_2CF(CF_2CF_2)_3$; $p = 1$) and THF, and esterified with AC2O to give a modified copolymer of no.-av. mol. wt. 12,500.

International Patent Classification

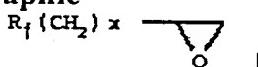
International Patent Classification, Main

C08G065-22

International Patent Classification, Secondary

C08G065-32

Graphic



Document Type

Patent

Language

Japanese

Supplementary Indexing

fluorine contg polyoxyalkylene oilproofing; waterproofing fluorine contg polyoxyalkylene; adhesion preventer fluorine contg polyoxyalkylene; soiling preventer fluorine contg polyoxyalkylene; mold release fluorine contg polyoxyalkylene; internal release fluorine contg polyoxyalkylene; adhesive release fluorine contg polyoxyalkylene

IT Related Fields

Title

Surface-coated poly(vinyl chloride) moldings

Inventor Name

Ohayashi, Atsushi; Arai, Hiromi

Patent Assignee

Mitsubishi Kasei Vinyl K. K., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN

JKXXAF

Patent Information

JP 63017940 A2 880125 Showa

Application Information

JP 86-162786 860710

Abstract

PVC moldings coated with a mixt. of F-contg. unsatd. ester-F-free compd. copolymers and acrylic polymers with glass transition temp. (Tg) 40-80° have good resistances to bleeding, dusting, staining, and water and are useful in prep. floor or wall tiles, desk mats, wire covers, etc. Thus, a 0.3-mm PVC sheet (contg. 50 phr DOP) was coated with a mixt. of 10 parts F-contg. polymer (Modiper F310) and 90 parts acrylic polymer (Tg 72°, prep. from Bu methacrylate 28, 2-hydroxyethyl methacrylate 10, methacrylic acid 2, and Me methacrylate 60 parts) in MEK (solids content 20%) and dried 1 min at 130° to give a 3 g/m² water-resistant coated sheet having good stain resistance (to lipsticks and magic inks) and bleeding of plasticizers (48 h at 60°) 11 mg/100 cm², vs. bad and 71, resp., for a sheet without the coating.

International Patent Classification

International Patent Classification, Main

C08J007-04

International Patent Classification, Secondary

B32B027-28; C09D003-81

Document Type

Patent

Language

Japanese

Supplementary Indexing

nonstaining surface coated PVC molding; fluoropolymer acrylic polymer blend coating; water resistance coated PVC molding; nonbleeding acrylic coated PVC molding

IT Related Fields

Indexing

Title

Coating compositions for poly(vinyl chloride)

Inventor Name

Oshibe, Yoshihiro; Ishigaki, Hideyo; Omura, Hiroshi; Aoshima, Kazuhito; Yamamoto, Takashi
Patent Assignee

Nippon Oils and Fats Co., Ltd., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN

JKXXAF

Patent Information

JP 62275136 A2 871130 Showa

Application Information

JP 86-117572 860523

Abstract

Coatings preventing the migration of plasticizers in PVC contain block copolymers which consist of fluoropolymers having perfluoroalkyl groups and N-methylol groups and polymers having good adhesion to PVC. Thus, Me methacrylate was polymd. in MEK contg. [-CO(CH₂)₄CO₂(C₂H₄O)₃CO(CH₂)₄CO₂O-]10 and copolymd. with CH₂:CHCO₂C₂H₄(CF₂)₇CF₃, N-methylolacrylamide, and Et acrylate in soln. to prep. a polymer for coating on a PVC film contg. DOP.

International Patent Classification

International Patent Classification, Main

C08J007-04

International Patent Classification, Secondary

C09D003-727

Document Type

Patent

Language

Japanese

Supplementary Indexing

PVC plasticizer film coating; migration plasticizer prevention coating; fluoro acrylic block polymer

IT Related Fields

Indexing

Concept Group

Concept Heading

Plasticizers

Title

Coating of vinyl chloride polymer moldings

Inventor Name

Ohayashi, Atsushi; Arai, Hiromi; Miyoshi, Motoyuki

Patent Assignee

Mitsubishi Kasei Vinyl K. K., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN

JKXXAF

Patent Information

JP 62169641 A2 870725 Showa

Application Information

JP 86-11259 860122

Abstract

Vinyl chloride polymer moldings are coated with a blend of CH₂:CF₂ polymers and copolymers of F-contg. unsatd. esters with F-free monomers for increased stain and water resistance and prevention of plasticizer migration. A 0.3-mm plasticized PVC film coated with 3 g/m² 5:95 blend of block fluoropolymer (Modiper F100) and C₃F₆-C₂F₄-CH₂:CF₂ copolymer had good stain and water resistance and plasticizer migration 21 mg/100 cm²; vs. poor and 66, resp., when coated with an acrylic resin.

International Patent Classification

International Patent Classification, Main

B32B027-30

International Patent Classification, Secondary

B32B027-30

Document Type

Patent

Language

Japanese

Supplementary Indexing

fluoropolymer coating PVC film; vinylidene fluoride polymer coating; stain resistance coating PVC; water resistance coating PVC; plasticizer migration prevention PVC; hexafluoropropylene copolymer coating; tetrafluoroethylene copolymer coating

IT Related Fields

Indexing

Concept Group

Concept Heading

Title

Fluorine-containing acrylic coating compositions

Inventor Name

Enomoto, Masaho; Nishioka, Shotaro

Patent Assignee

Seiko Kasei Kk, Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN

JKXXAF

Patent Information

JP 04363370 A2 921216 Heisei

Application Information

JP 91-42675 910213

Abstract

Title antisoiling compns. useful for PVC-faced articles, comprise acrylic copolymers with av. mol. wt. 100,000-1,000,000 obtained by the suspension-polymn. of a mixt. of Me methacrylate 60-90, F-contg. .alpha.,.beta.-ethylenic unsatd. monomers 2-20, and other monomers 8-20% in the presence of an initiator and an org. solvent, and optionally other polymers. Thus, a 10% soln. of 2-ethylhexyl methacrylate-2-hydroxypropyl methacrylate-Me methacrylate-2,2,2-trifluoroethyl methacrylate copolymer (initial monomer ratio 5:5:80:10, no. av. mol. wt. 478,000) in MEK/toluene was applied to a PVC sheet and dried at 120° to give a flexible coated sheet with good antisoiling property.

International Patent Classification

International Patent Classification, Main

C09D133-12

International Patent Classification, Secondary

C09D133-16

Document Type

Patent

Language

Japanese

Supplementary Indexing

fluorine acrylic coating antistaining flexibility; PVC substrate acrylic antistaining coating

IT Related Fields

Indexing

Concept Group

Concept Heading

Cplus Answer Number 30 - © 1997 ACS

Title

Coatings resistant to microorganisms

Inventor Name

Schindler, Fritz; Hill, Frank F.

Patent Assignee

Huels Ag, Germany

Publication Source

Ger. Offen., 6 pp.

CODEN

GWXXBX

Patent Information

DE 19535729 A1 970327

Application Information

DE 95-19535729 950926

Abstract

The title coatings, esp. resistant to bacteria and fungi, contain silanes, fluoroorganosilanes, and/or their hydrolysis or condensation products. An Al foil was coated with a (1H,1H,2H,2H-perfluorooctyl)triethoxysilane-based coating compn. to give a coating which, when inoculated with *Staphylococcus epidermidis* and incubated at 37° for 3 days, showed <0.01% surface contamination; vs. 10% for uncoated Al and 30% for plasticized PVC.

International Patent Classification

International Patent Classification, Main

C09D005-14

International Patent Classification, Secondary

C09D183-04; C09D185-00; B05D005-00; A61L027-00; A61L002-00; A61B017-00;
A61B001-00; A61C001-00

Document Type

Patent

Language

German

Accession Number

1997:331955

Reference Number

126:306429

Title

Formation of soilproof water-based fluoropolymer dispersion coatings on substrates with poor heat resistance

Inventor Name

Hidaka, Hiroyuki; Suzuki, Yasuyuki

Patent Assignee

Dainippon Ink & Chemicals, Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN

JKXXAF

Patent Information

JP 08283654 A2 961029 Heisei

Application Information

JP 95-93563 950419

Abstract

Water-based fluoropolymer dispersions, which are prep'd. by polymg. perfluoroalkyl-substituted ethylenic unsatd. monomers optionally with polymerizable ethylenic unsatd. monomers in the presence of self-dispersing polyurethanes, are applied on non-heat-resistant substrates and dried at 50-100° to give soilproof coatings. The perfluoroalkyl-substituted monomers may be RfAOC(O)CR1:CH2 (Rf = C4-20 perfluoroalkyl; R1 = H, Me; A = Q, CONR2Q, SO2NR2Q; Q = C1-10 alkylene; R2 = C1-4 alkyl). Thus, adipic acid-1,4-butanediol (I) copolymer 721, I 13.6, dimethylolpropionic acid 65.6, isophorone diisocyanate 300, and hexamethylenediamine 36.5 parts were polymd. in water to give a 25%-solids self-dispersing polyurethane, 360 parts of which with water was blended with a mixt. of perfluoroalkyl-substituted ethylenic monomer polymer 190, Me methacrylate 15, 2-hydroxyethyl methacrylate 3, N-methylolacrylamide 2, lauryl mercaptan 2, and Me₂CO 100 parts, emulsified, mixed with ammonium persulfate, and polymd. to give a stable dispersion. The dispersion was applied on a soft PVC film and dried at 60° for 5 min to give a coating showing water contact angle 115° and complete removal of tobacco stain on the surface by wiping with paper.

International Patent Classification

International Patent Classification, Main

C09D151-08

International Patent Classification, Secondary

B05D005-00; C08F002-16; C08F002-44; C08F283-00

Document Type

Patent

Title

Waterproofing fluorine-containing acrylic coating compositions and their coated substrates

Inventor Name

Ito, Katsuji; Yamauchi, Masaru

Patent Assignee

Asahi Glass Co Ltd, Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN

JKXXAF

Patent Information

JP 08259877 A2 961008 Heisei

Application Information

JP 95-66408 950324

Abstract

The compns. giving waterproofing films to glass, metals, woods, plastics, PVC substrates, etc., contain (A) polymers contg. units of acrylates having F-contg. alc. residues and/or methacrylates having F-contg. alc. residues, (B) .gtoreq.1 polymers selected from polyurethanes free of NCO, copolymers contg. units of hydrophilic macromonomers and F-contg. olefins, and polymers contg. units of F-free acrylic acid esters and/or F-free methacrylic acid esters, and (C) .gtoreq.1 resins selected from amino resins, NCO-contg. polyurethanes, and polymers having oxazoline residues. Substrates having cured films of the compns. are also claimed. Thus, 38.0 parts CF₂CFCI was fed to a reactor contg. Et vinyl ether 22.1, hydroxybutyl vinyl ether 1.5, and CH₂:CHOC₂CH₂(CH₂CH₂O)_nH 4.5 parts in H₂O contg. polyethylene glycol monolauryl ether, K₂CO₃, NaHSO₃, and ammonium persulfate and allowed to react for 12 h at 30° in vacuo to give an aq. dispersion of a polymer with particle diam. 0.15 .mu.m and no.-av. mol. wt. apprx.500. A mixt. of (a) 25 parts 20%-solid aq. dispersion contg. a copolymer of 70 parts CH₂:CHCO₂CH₂CH₂(CF₂)_kCF₃ (k= 5-13, av. 8) and 30 parts vinyl chloride, (b) 10 parts (as solid) the obtained polymer dispersion (solid 50%), and (c) 6 parts Sumitex Resin M 3 (melamin resin) were blended with H₂O to give a 20%-solid compn., which was cast on an Al plate at 2 .+-. 0.5° and 75 .+-. 3% and heated for 30 min at 140° to give test pieces with pencil hardness 3H, no crack by bending test, and contact angle 95°.

International Patent Classification

International Patent Classification, Main

C09D127-12

International Patent Classification, Secondary

C08L033-16; C08L039-04; C09D133-16; C09D139-04; C09D161-20; C09D175-04;
C09K003-18

Document Type

Title

Coating compositions for soft substrates

Inventor Name

Nishiwaki, Koichi; Ito, Nobuyuki; Someya, Hiroshi; Kobayashi, Katsuo; Tsucha, Hiroshi

Patent Assignee

Japan Synthetic Rubber Co Ltd, Japan; Dainippon Shikizai Kogyo Kk

Publication Source

Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN

JKXXAF

Patent Information

JP 07238252 A2 950912 Heisei

Application Information

JP 94-52990 940225

Abstract

The title compns. with weatherability, stainproof property, and adhesion, esp. useful for PVC, contain (A) 100 parts mixts. of 60-80 parts 60-75:24-40:0-20 wt.% vinylidene fluoride (I)-tetrafluoroethylene (II)-hexafluoropropylene (III) copolymer and 40-20 parts NCO-contg. acrylic polymers contg. ≥ 85% Me methacrylate (IV) and (B) 100-500 parts C3-5 ketone solvents. Thus, a coating comprising 62:23:15 I-II-III copolymer 17, 73:27 I-II copolymer 4, IV-isocyanatoethyl acrylate-Bu acrylate copolymer 40%-solid MIBK soln. 22.5, MeO(OEt)₃ 1, 2-hydroxy-4-octoxybenzophenone 1, MIBK 20, MEK 30, and acetone 6.5 parts was applied to a PVC film contg. 35% dioctyl phthalate and dried at 100°.

International Patent Classification

International Patent Classification, Main

C09D127-16

International Patent Classification, Secondary

C09D133-12

Document Type

Patent

Language

Japanese

Supplementary Indexing

fluoropolymer isocyanate acrylic polymer coating; PVC soft film adhesion fluoropolymer coating

IT Related Fields

Indexing

Concept Group

Title

Surface-protective films with ultraviolet shielding properties

Inventor Name

Seki, Shigemi; Ueda, Tomoaki; Yamaoka, Midori

Patent Assignee

Toray Industries, Japan; Tore Gosei Fuirumu Kk

Publication Source

Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN

JKXXAF

Patent Information

JP 07148896 A2 950613 Heisei

Application Information

JP 93-298076 931129

Abstract

The title films have a fluoropolymer layer successively coated with UV-absorbing acrylic polymer layers and heat-sealable polymer layers. Thus, coating ULS 935LH (UV-absorbing acrylic polymer) on an ethylene-tetrafluoroethylene copolymer film and coating Acrypet MD on top gave a surface-protective film showing good UV shielding and heat lamination properties and durability.

International Patent Classification

International Patent Classification, Main

B32B027-30

International Patent Classification, Secondary

B32B027-30; B32B009-00; B32B021-08; B32B027-08; B32B027-16; B32B027-18

Document Type

Patent

Language

Japanese

Supplementary Indexing

surface protective film UV shield; acrylic polymer UV protective film

IT Related Fields

Indexing

Concept Group

Concept Heading

Plastics, film

Role

PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

Title

Fluoropolymer compositions containing acrylic resins for coatings

Inventor Name

Horibatake, Tomonori; Ishikawa, Satoshi

Patent Assignee

Japan Synthetic Rubber Co Ltd, Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN

JKXXAF

Patent Information

JP 07053822 A2 950228 Heisei

Application Information

JP 93-219048 930811

Abstract

Title compns., providing **coatings** with improved weatherability and resistance to hot water and flex, contain dissolved (A) vinylidene fluoride (I)-tetrafluoroethylene (II) copolymer, (B) I-II-hexafluoropropylene (III) copolymer, and (C) acrylic resins including .gtoreq.50% Me methacrylate (IV) at (A + B)/C = 30/70-90/10. Thus, 50:50 I-II copolymer 30, 60:30:10 I-II-III copolymer 30, and 97.7:2.7 IV-methacrylic acid copolymer 40 parts were dissolved in 200 parts 50:50 mixt. of Me iso-Bu ketone and AcOEt to give title compn., 100 g of which was mixed with 20 g CR 97 and 1 g an amine dispersant, applied onto an Al plate, and dried at room temp. for 7 days to give a test piece showing good retention of initial gloss after 30 days in water at 50° and after 3000-h exposure to sunshine weather-O-meter.

International Patent Classification

International Patent Classification, Main

C08L027-12

International Patent Classification, Secondary

C08L027-12; C08L033-12; C09D127-12; C09D133-12

Document Type

Patent

Language

Japanese

Supplementary Indexing

fluoro polymer acrylic resin coating; compatibility fluoropolymer acrylic resin coating; gloss fluoropolymer acrylic resin coating; hot water resistance fluoropolymer coating; flex resistance fluoropolymer blend coating; vinylidene fluoride copolymer blend coating; fluoroethylene copolymer blend coating; fluoropropylene copolymer blend coating; methyl methacrylate

Title

Soil- and weather-resistant film-coated soft vinyl chloride resin articles

Inventor Name

Sawada, Hiroyuki; Marumoto, Etsuzo; Nishio, Tatsuo; Iida, Akihito; Inukai, Hiroshi

Patent Assignee

Toa Gosei Chem Ind, Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN

JKXXAF

Patent Information

JP 06287334 A2 941011 Heisei

Application Information

JP 93-95227 930330

Abstract

Title protective films are prep'd. from compns. contg. 10-25:75-90 mol% ClCF₃-vinylidene fluoride copolymer (I), (meth)acrylate ester resins with glass-transition temp. of >=60°, and 1-20% (based on total polymers) benzophenones and/or benzotriazoles. A plasticized PVC sheet was coated with a soln. contg. I 25, PMMA 75, and Mark 1413 10 parts to form a sheet showing good blocking, soil, weather, and plasticizer migration resistance.

International Patent Classification

International Patent Classification, Main

C08J007-04

International Patent Classification, Secondary

C08K005-01; C08L027-16; C08L033-08

Document Type

Patent

Language

Japanese

Supplementary Indexing

mulch PVC antisoiling coating; fluoropolymer PMMA antisoiling coating PVC

IT Related Fields

Indexing

Concept Group

Concept Heading

Mulches

Text Modification

(UV absorber-contg. poly(meth)acrylate- and chlorotrifluoroethylene-vinylidene fluoride copolymer-based coatings for PVC sheets)

IT Related Fields

Title

Coated thermoplastic resin sheets and the coating compositions

Inventor Name

Miura, Ryuichi; Yoneyama, Teru; Takayanagi, Takashi

Patent Assignee

Asahi Glass Co Ltd, Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN

JKXXAF

Patent Information

JP 06073330 A2 940315 Heisei

Application Information

JP 92-266691 920909

Priority Application Information

JP 92-190088 920624

Abstract

The resin sheets are coated with compns. consisting of (1) carboxyl group-contg. fluoropolymers with acid value 10-150 mg KOH/g, (2) carboxyl group-contg. acrylic polymers which are compatible with the fluoropolymers and have acid value 10-150 mg KOH/g, and (3) 0.1-30 phr Al chelates. A soft poly(vinyl chloride) sheet was coated with a compn. contg. (1) 50 parts of a hexahydrophthalic anhydride-modified 39.4:48.1:12.5 copolymer of Bu vinyl ether, tetrafluoroethylene and .omega.-hydroxybutyl vinyl ether, (2) 50 parts of a 6:2:2 copolymer of iso-Bu methacrylate, Bu methacrylate and methacrylic acid, and (3) 20 parts Alumichelate D. The coating was storage-stable and had good adhesion, weather resistance, blocking resistance and weldability.

International Patent Classification

International Patent Classification, Main

C09D133-16

International Patent Classification, Secondary

C09D133-16; C08J007-04; C09D127-12

Document Type

Patent

Language

Japanese

Supplementary Indexing

thermoplastic resin sheet coating; fluoropolymer acrylic polymer coating; aluminum chelate coating thermoplastic

IT Related Fields

Indexing

Title

Coating materials for plastic films

Inventor Name

Beer, Ekkehard; Kochem, Karl Heinz; Schmidt, Michael

Patent Assignee

Hoechst A.-G., Germany

Publication Source

Eur. Pat. Appl., 7 pp.

CODEN

EPXXDW

Patent Information

EP 554798 A2 930811

Designated State

R: DE, FR, GB, IT, LU, NL

Application Information

EP 93-101357 930129

Priority Application Information

DE 92-4203208 920205

Abstract

The title materials comprise an intrinsically conductive polymer and .gtoreq. 1 additives which act to prevent strong adhesion of metal films which are subsequently formed on the plastic films. Use of the coated films for transfer metalization is described. The coatings serve both as release films and to dissipate static charges developed during the transfer process.

International Patent Classification

International Patent Classification, Main

H01B001-12

International Patent Classification, Secondary

C08G061-12; C09D005-24

Document Type

Patent

Language

German

Supplementary Indexing

transfer metalization film antistatic release layer; plastic film antistatic release layer; polymer conductor antistatic release layer

IT Related Fields

Indexing

Concept Group

Title

Coating materials on automobile part moldings

Inventor Name

Nagata, Kazuto; Oohayashi, Atsushi

Patent Assignee

Mitsubishi Kasei Vinyl, Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN

JKXXAF

Patent Information

JP 05185570 A2 930727 Heisei

Application Information

JP 92-5174 920114

Abstract

Coatings for the prevention of degrdn. by falling ash on vinyl chloride resin moldings comprise copolymers of acrylic monomers with perfluoroalkyl group-contg. acrylic monomers, acrylic copolymers contg. no F, and vinylidene fluoride resins. Thus, a PVC part was coated with 50:30:5:15 Me methacrylate (I)-Bu methacrylate (II)-CHF₂CF₂CH₂OCOCMe:CH₂-C8F₁₇(CH₂)₂OCOCMe:CH₂ copolymer, 60:30:10 I-II-Et acrylate copolymer, and Kynar ADS in solids ratio 15:5:80 to form a weather resistant coating.

International Patent Classification

International Patent Classification, Main

B32B027-30

International Patent Classification, Secondary

B32B027-30; B60J011-00

Document Type

Patent

Language

Japanese

Supplementary Indexing

PVC automobile part coating; acrylic polymer coating PVC; fluoropolymer coating PVC; weather resistant coating automobile part

IT Related Fields

Indexing

Concept Group

Concept Heading

Fluoropolymers

Title

PVC resin moldings with curable fluoropolymer coatings

Inventor Name

Iida, Akihito; Nishio, Tatsuo; Koyama, Masanobu; Marumoto, Etsuzo

Patent Assignee

Toa Gosei Chemical Industry Co., Ltd., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN

JKXXAF

Patent Information

JP 04345842 A2 921201 Heisei

Application Information

JP 91-146860 910522

Abstract

The moldings are coated with compns. contg. curing agents and copolymers of fluoroolefin 30-60 mol%, hydroxyalkyl crotonate 3-30 mol%, and optionally other vinyl monomer Itoreq.67 mol%. Thus, a curing agent Coronate EH and chlorotrifluoroethylene-Et vinyl ether-2-hydroxyethyl crotonate-vinyl pivalate copolymer were mixed with a UV-absorbent and then coated on rigid PVC to give a sheet with good weather-resistance.

International Patent Classification

International Patent Classification, Main

B32B027-30

International Patent Classification, Secondary

B32B007-02; B32B027-08; C08J007-04; C09D127-12

Document Type

Patent

Language

Japanese

Supplementary Indexing

PVC molding curable fluoropolymer coating; weather resistant coating fluoropolymer PVC; curing agent fluoropolymer weather resistant coating

IT Related Fields

Indexing

Concept Group

Concept Heading

Crosslinking agents

Text Modification

Title

Manufacture of coated vinyl chloride resin sheets and coating compositions

Inventor Name

Miura, Ryuichi; Yoneyama, Teru

Patent Assignee

Asahi Glass Co., Ltd., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN

JKXXAF

Patent Information

JP 04218539 A2 920810 Heisei

Application Information

JP 90-412091 901219

Abstract

Antiblocking vinyl chloride resin sheets are manufd. by coating the sheets with compns. contg. (A) fluoropolymers having active H-contg. crosslinking groups, (B) acrylic copolymers miscible with A, (C) polyisocyanate crosslinking agents, and (D) 0.001-5% (based on A + B) amines or their salts with low catalytic activity at room temp. but high activity at 40-200°, drying at 40-200° for 5 s to 20 min, and winding. Thus, a flexible PVC sheet was coated with a compn. contg. n-Bu vinyl ether-hydroxybutyl vinyl ether-tetrafluoroethylene copolymer 50, Bu acrylate-2-hydroxyethyl methacrylate-iso-Bu methacrylate copolymer 50, MEK 100, Coronate EH 15, and Ucat SA No. 1 (DBU phenol salt) 0.25 part, dried at 100° for 30 s, wound, and stored 24 h to give a coated PVC film showing no blocking.

International Patent Classification

International Patent Classification, Main

C08J007-04

International Patent Classification, Secondary

B05D007-02; B05D007-24; B32B027-30; C09D175-00

Document Type

Patent

Language

Japanese

Supplementary Indexing

antiblocking coating acrylic polymer; PVC film coating antiblocking fluoropolymer; polyisocyanate hardener coating antiblocking; amine crosslinking catalyst antiblocking coating

IT Related Fields

Indexing

Title

Vinyl chloride polymer-coated fabrics

Inventor Name

Sakobe, Tadayuki; Yamamoto, Sachiyo

Patent Assignee

Unitika Ltd., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN

JKXXAF

Patent Information

JP 04245976 A2 920902 Heisei

Application Information

JP 91-32237 910131

Abstract

Title fabrics, with good washfast soiling and water resistance and useful for coverings and tents, are coated first with vinyl chloride polymers and then with solvent-based crosslinked fluoropolymers mainly consisting of alkyl vinyl ether-fluoroolefin copolymers. Thus, a plain weave polyester fabric was coated on both sides by topping with a compn. of PVC, DOP, CaCO₃, Zn stearate, and pigment, baked at 180°, then coated with a compn. of Fluorotop FT 1030 (fluoroolefin-alkyl vinyl ether copolymer) and isocyanate-contg. Fluorotop curing agent, dried at 80°, and crosslinked at 130°.

International Patent Classification

International Patent Classification, Main

D06M015-347

International Patent Classification, Secondary

C09D127-12; D06M015-256

Document Type

Patent

Language

Japanese

Supplementary Indexing

PVC fluoropolymer antisoiling coating fabric; fluoroolefin alkyl vinyl ether copolymer; crosslinking fluoropolymer coating fabric; polyester fabric coating antisoiling; water resistance
PVC fluoropolymer coating

IT Related Fields

Indexing

Concept Group

Title

Photocurable, fluorine-containing polyurethane acrylate coating compositions

Inventor Name

Takamatsu, Yukishige; Niimoto, Masaki; Sato, Mitsuo

Patent Assignee

Mitsubishi Rayon K. K., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN

JKXXAF

Patent Information

JP 04093317 A2 920326 Heisei

Application Information

JP 90-209675 900808

Abstract

The title compns. contain .gtoreq.30% compns. prep'd. from polyisocyanates, F-contg. diols, and unsatd. alcs. Thus, coating a mixt. of urethane acrylate (prep'd. from 2 mol 2:1 2,4-diisocyanato-1-methylcyclohexane-diethylene glycol (I) adduct (II) with 1 mol H(CF₂)₄CH₂OCH₂CH(OH)CH₂OH and 2 mol 2-hydroxyethyl acrylate (III)) 70, 1,6-hexanediol diacrylate 10, urethane oligomer (prep'd. from II 1.2, I 1, and III 0.4 mol) 20, and photoinitiator 3 parts on PVC and curing with UV light gave coatings with good weather and solvent resistance and oil and water repellency.

International Patent Classification

International Patent Classification, Main

C08G018-67

International Patent Classification, Secondary

C08F299-02; C08G018-38

Document Type

Patent

Language

Japanese

Supplementary Indexing

fluorinated polyurethane acrylate coating; photocurable fluoropolymer acrylate coating; weather resistance coating; PVC coating photocurable; hydroxyethyl acrylate polyurethane coating

IT Related Fields

Indexing

Concept Group

Concept Heading

Title

Soilproofing of vinyl chloride resin-finished wallpaper

Inventor Name

Otoshi, Yukio; Sano, Mikihiko

Patent Assignee

Asahi Glass Co., Ltd., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN

JKXXAF

Patent Information

JP 03275859 A2 911206 Heisei

Application Information

JP 90-71826 900323

Abstract

Fluoro oligomers are added to vinyl chloride resin finishes for wallpaper to prevent soiling. Thus, a PVC plastisol contg. 1% 50:50 perfluoroctylethyl acrylate-benzyl methacrylate copolymer (I) was coated onto wallpaper to give a sample that exhibited gloss retention 92% after a soiling test, compared with 63 without I.

International Patent Classification

International Patent Classification, Main

E04F013-00

International Patent Classification, Secondary

C08F020-22; C08L029-04

Document Type

Patent

Language

Japanese

Supplementary Indexing

fluoropolymer soilproofing PVC coated wallpaper; fluoroctylethyl acrylate copolymer soilproofing agent; benzyl methacryate fluoropolymer soilproofing agent

IT Related Fields

Indexing

Concept Group

Concept Heading

Coating materials

Text Modification

(PVC, contg. fluoro oligomer soil proofing agents, for wallpaper)

Title

Weather resistant coatings for flexible substrates

Inventor Name

Hsu, Chih Chung; Ree, Buren R.

Patent Assignee

Minnesota Mining and Mfg. Co., USA

Publication Source

Eur. Pat. Appl., 6 pp.

CODEN

EPXXDW

Patent Information

EP 467570 A2 920122

Designated State

R: CH, DE, DK, ES, FR, GB, IT, LI

Application Information

EP 91-306141 910705

Priority Application Information

US 90-548857 900706

Abstract

The title coatings, resisting dirt and stains and useful in outdoor graphics, contain 25-60% 40-80:60-20 vinylidene fluoride (I)-fluorinated comonomer copolymers and 75-40% Me methacrylate (II) polymer. A mixt. of 1 part 25% xylene soln. of II polymer and 2.5 parts 10% MIBK soln. of I-C₂ClF₃ copolymer contg. 3% each UV absorber and hindered amine light stabilizer was coated on plasticized PVC and heated 2 min at 150° F and 3 min at 280° F to give a coating resisting dirt, stains, and discoloration in outdoor exposure.

International Patent Classification

International Patent Classification, Main

C08J007-04

International Patent Classification, Secondary

C09D127-12; C09D133-12

Document Type

Patent

Language

English

Supplementary Indexing

weather resistance coating; soil resistance coating; PVC coating weather resistance; methacrylate polymer blend coating; vinylidene fluoride copolymer coating; chlorotrifluoroethylene copolymer coating; fluoropolymer blend coating

Title

Fluoropolymer coatings

Inventor Name

Kawashima, Chikafumi; Yoshida, Seiichi

Patent Assignee

Central Glass Co., Ltd., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN

JKXXAF

Patent Information

JP 03182538 A2 910808 Heisei

Application Information

JP 89-323141 891213

Abstract

Title coatings, antistaining with good flexibility and useful for plasticized vinyl chloride resins, comprise a mixt. of an org. soln. of flexible fluoropolymers obtained by grafting 20-80 parts vinylidene fluoride to 100 parts fluoroelastomers with glass transition temp. (Tg) below ambient temp. composed of .gtoreq.1 F-contg. monomer and double bond- and peroxy linkage-contg. monomer and an org. soln. of polyurethanes with Tg .ltoreq.40° at fluoropolymer/polyurethane = 100/5 - 100/70. Thus, a DMF soln. of vinylidene fluoride-grafted chlorotrifluoroethylene-vinylidene fluoride copolymer and an MEK soln. of Nippollan 3110 (polyurethane with Tg -30°) were mixed at resin ratio 100/7.7, applied to a 0.5 mm-thick plasticized PVC/polyester cloth composite membrane, and dried at 100° to form a 10 .mu.m-thick film with good adhesion (100/100), good staining resistance (by visual inspection after 2-mo outdoor exposure), and crease recovery (JIS L 1096) 92%.

International Patent Classification

International Patent Classification, Main

C08L027-12

International Patent Classification, Secondary

C09D127-16

Document Type

Patent

Language

Japanese

Supplementary Indexing

fluoropolymer polyurethane antistaining flexibility coating; graft fluoropolymer polyurethane coating; PVC plasticized fluoropolymer polyurethane coating

Title

Manufacture of weather-resistant PVC sheets

Inventor Name

Minemoto, Yasunobu

Patent Assignee

Asahi Glass Co., Ltd., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN

JKXXAF

Patent Information

JP 03124439 A2 910528 Heisei

Application Information

JP 89-263100 891011

Abstract

Title sheets are prep'd. by coating PVC sheets with blends of crosslinked F-contg. copolymers and compatible acrylic copolymers and hot pressing together with other PVC sheets to form laminated sheets with a coated surface layer. Thus, 0.2-mm PVC sheet was coated (20 .mu.m) with a 50:50 blend of 55:12:15:18 chlorotrifluoroethylene-cyclohexyl vinyl ether-Et vinyl ether-hydroxybutyl vinyl ether copolymer and 25:60:15 Me methacrylate-iso-Bu methacrylate-hydroxyethyl methacrylate copolymer contg. Coronate C 2507 crosslinking agent, and 6 noncoated PVC sheets were sandwiched betweeen two of the coated sheet and pressed at 160° and 30 kg/cm² for 10 min to give a 3-mm sheet with tensile strength 700 and 680 kg/cm², elongation 90 and 86%, and falling impact strength 60 and 55 kg-cm, resp., before and after a exposure to a sunshine weatherometer for 2000 h, vs. 700 and 500, 90 and 30, and 60 and 20, resp., without the coating.

International Patent Classification

International Patent Classification, Main

B32B027-30

Document Type

Patent

Language

Japanese

Supplementary Indexing

PVC sheet weather resistance; fluoropolymer coating PVC sheet; acrylic polymer coating PVC sheet; methacrylate copolymer coating PVC sheet

IT Related Fields

Indexing

30

Title

Plasticized PVC sheets with weather- and soil-resistant layers

Inventor Name

Takayanagi, Takashi; Miyazaki, Nobuyuki

Patent Assignee

Asahi Glass Co., Ltd., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN

JKXXAF

Patent Information

JP 02299839 A2 901212 Heisei

Application Information

JP 89-118782 890515

Abstract

The title sheets have layers prep'd. from compatible blends of partly crosslinked fluoropolymers, acrylic polymers, and optionally fluoroalkyl group-contg. acrylic polymers. Thus, a mixt. of 39.4:12.5:48.1 Bu vinyl ether-.omega.-hydroxybutyl vinyl ether-tetrafluoroethylene copolymer (I) 50, 2:1:7 Bu acrylate-2-hydroxyethyl methacrylate-iso-Bu methacrylate copolymer (II) 50, xylene 100, an isocyanate hardener 15, and a benzophenone-deriv. UV absorber 10 parts was applied to 15 .mu.m (dry) on a molding, air dried, and cured 2 min at 80° to give a layer having, after placed 1000 h in Sunshine Weatherometer, crosscut adhesion 100/100 and color change 0.9, vs. 0/100 and 1.1, resp., for a layer without II, and 0/100 and 7, resp., for a layer without I.

International Patent Classification

International Patent Classification, Main

B32B027-30

International Patent Classification, Secondary

B32B027-30

Document Type

Patent

Language

Japanese

Supplementary Indexing

fluoropolymer acrylic blend coating weatherability; soil resistance fluoropolymer acrylic coating

IT Related Fields

Indexing

Concept Group

Concept Heading

Title

Weather-resistant protective films for vinyl fabrics

Inventor Name

Ocampo, Don Oliveros; Palmer, Emery A.

Patent Assignee

Rexham Corp., USA

Publication Source

PCT Int. Appl., 28 pp.

CODEN

PIXXD2

Patent Information

WO 9014393 A1 901129

Designated State

W: CA, JP

RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE

Application Information

WO 90-US2821 900517

Priority Application Information

US 89-354814 890522

Abstract

The title films comprise acrylic polymers and fluoropolymers and have compn. gradient across the film thickness such that one side of the films is fluoropolymer-rich to provide good stain and weather resistance and the opposite sides of the films is acrylic polymer-rich to provide self-bonding ability. Thus, a PET film was spread with a compn. of tetrafluoroethylene (I)-vinylidene fluoride (II) copolymer 21.63, Me methacrylate-Et methacrylate copolymer (III) 7.21, MEK 70.96, a hindered amine light stabilizer (A) 0.10, and an UV screener (B) 0.10 part, dried at 120° F, spread with a compn. of I-II hexafluoropropene copolymer 10.31, III 19.16, MEK 68.17, A 1.18, and B 1.18 parts, and dried at 240° F to give a sheet, which was laminated on a vinyl outdoor awning fabric with the PET layer oriented outwardly by passing through a hot nip at 310° F and 50 psi and the PET film was stripped off to give a fabric with good adhesion to its protecting film and showing good weatherability.

International Patent Classification

C09D005-00; C09J007-02; D06M015-256

Document Type

Patent

Language

English

Supplementary Indexing

Title

Fluoropolymer solutions for coatings

Inventor Name

Kawashima, Chikafumi; Yoshida, Seiichi; Koshida, Toru

Patent Assignee

Central Glass Co., Ltd., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN

JKXXAF

Patent Information

JP 02135269 A2 900524 Heisei

Application Information

JP 88-289562 881116

Abstract

Antistaining title solns. with good flexibility and resistance to chems., weather, and tackiness are mixts. of flexible fluoropolymers in polar solvents and Me methacrylate polymers in org. solvents and the fluoropolymers are prep'd. by grafting 20-80 parts vinylidene fluoride (I) with 100 parts fluoro elastic copolymers (glass transition temp. $\Delta t \geq 10^\circ\text{C}$, room. temp.) prep'd. by copolymg. double bond- and peroxy bond-contg. monomers and $\geq 10\%$ F-contg. monomers. Thus, 100 g I was graft polymd. with 144 g tert-butylperoxy allyl carbonate-chlorotrifluoroethylene-vinyl fluoride copolymer to give a resin, which was stirred with DMF. The resulting soln. was stirred with Acrypet MD in MEK to give a compn., which was applied on E 5 (a plasticized PVC/polyester cloth composite membrane) and dried to give a coating to show good stain resistance after a 2 mo-outdoor exposure, vs. poor for E 5 without coating.

International Patent Classification

International Patent Classification, Main

C09D127-12

International Patent Classification, Secondary

C09D151-00; C09D151-04

Document Type

Patent

Language

Japanese

Supplementary Indexing

methyl methacrylate fluoropolymer coating flexibility; antistaining methyl methacrylate fluoropolymer coating; chem resistance fluoropolymer coating; weather resistance fluoropolymer coating

Title

Decorative sheets for building materials

Inventor Name

Yamaguchi, Tetsuhisa

Patent Assignee

Dainippon Ink and Chemicals, Inc., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN

JKXXAF

Patent Information

JP 02059338 A2 900228 Heisei

Application Information

JP 88-210039 880824

Abstract

The title sheets are prep'd. by laminating protective layers, printed patterns, thermoplastic base layers, and fabrics with basis wt. 10-100 g/m² and gas permeability 5-100 s. A decorative sheet was prep'd. by coating a PVC sol on a polyester nonwoven textile (basis wt. 60 g/m², gas permeability 70 s), gravure-printing the coated surface after drying, overlaying with a vinyl chloride-vinyl acetate copolymer-acrylic polymer mixt., embossing, and coating with a fluoropolymer (Fluorotop FT-200).

International Patent Classification

International Patent Classification, Main

B32B027-12

International Patent Classification, Secondary

B32B003-30; B32B027-30

Document Type

Patent

Language

Japanese

Supplementary Indexing

building material decorative laminate; polyester decorative laminate; PVC laminate decorative; acrylic polymer blend laminate; vinyl acetate copolymer laminate; fluoropolymer coating
laminate decorative

IT Related Fields

Indexing

Concept Group

Concept Heading

Title

Coated vinyl chloride resin moldings

Inventor Name

Kuriyama, Satoshi; Nakajima, Shunichi

Patent Assignee

Sanyo Chemical Industries, Ltd., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN

JKXXAF

Patent Information

JP 02081629 A2 900322 Heisei

Application Information

JP 88-234620 880919

Abstract

The title coatings, preventing bleeding of additives, contain fluoroalkyl (meth)acrylate copolymers and polymers bearing hydrolyzable silyl groups in 1-50:99-50 ratio. A mixt. of 50% 40:58 CF₃(CF₂)₇(CH₂)₂O₂CCMe:CH₂-Me methacrylate copolymer 5, 50% 25:18:30:25 Me méthacrylate-styrene-2-ethylhexyl acrylate-3-(trimethoxysilyl)propyl methacrylate copolymer 55, catalyst 1, and PhMe 29 parts was coated (2 .mu. dry basis) on a 0.1-mm plasticized PVC film, aged 1 wk at room temp., and the coated film was used for a greenhouse cover with transparency 91 and 68% after 0 and 24 mo; vs. 91 and 5, resp., for an uncoated PVC film.

International Patent Classification

International Patent Classification, Main

B32B027-30

International Patent Classification, Secondary

B32B027-30; C08J007-04

Document Type

Patent

Language

Japanese

Supplementary Indexing

PVC coating migration prevention; fluoropolymer coating PVC film; silane deriv copolymer coating; greenhouse PVC film nonmigrating; methacrylate copolymer coating PVC; acrylate copolymer coating PVC; styrene copolymer coating PVC

IT Related Fields

Indexing

Concept Group

Concept Heading

Greenhouses

Title

Manufacture of soiling-resistant fabric laminates

Inventor Name

Yamagami, Toru; Azuma, Toshiyuki; Oku, Takehiro; Kawabata, Akira; Takagi, Hidenao

Patent Assignee

Kansai Hanpu Kagaku Bosui Co., Ltd., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN

JKXXAF

Patent Information

JP 62249740 A2 871030 Showa

Application Information

JP 86-94330 860423

Abstract

The waterproof title laminates with **fluoropolymer** outermost layers contain an acrylic polymer adhesive layer under the outermost layer in the backside. Thus, polyester fabric (155 g/m²) both surfaces were coated with PVC (Vinychlon 3000M) (contg. plasticizers and additives), followed by laminating the front side with a composite film (50-.mu.) of PVC film (innermost), poly(Me methacrylate), and poly(vinylidene fluoride) at 160° and 4 kg/cm² for 5 s. The back side of fabric was coated with mixt. of Acrypet MD (I)-PVC-MEK-PhMe (90:10:200:200) and mixt. of I-fluoropolymer (Neoflax FS-509)-MEK-PhMe (98:20:200:200) and heated for 1 min at 80° to give a soiling- and weather-resistant laminates suitable for hot-bonding fabrication.

International Patent Classification

International Patent Classification, Main

B32B027-12

International Patent Classification, Secondary

D06M015-00; D06M017-00; D06N003-04; E04H015-54

Document Type

Patent

Language

Japanese

Supplementary Indexing

methacrylate coated polyester fabric laminate; PVC coated polyester fabric laminate;
polyvinylidene fluoride coated polyester laminate; acrylic polymer coated polyester laminate;
fluoropolymer coated polyester fabric laminate; soiling resistant polyester fabric laminate

IT Related Fields

Indexing

Title

Coating on UV-absorbing films

Inventor Name

Omura, Akira; Takakura, Shigehiro

Patent Assignee

Nippon Carbide Industries Co., Inc., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN

JKXXAF

Patent Information

JP 60245552 A2 851205 Showa

Application Information

JP 84-100631 840521

Abstract

A UV-absorbing film is coated with a mixt. of a hydroxy-contg. fluoropolymer (no.-av. mol. wt. 30,000-50,000) comprising .gtoreq. 70 mol % fluoroolefin, cyclohexyl vinyl ether, alkyl vinyl ether and hydroxyalkyl vinyl ether and a polyisocyanate at 0.9-1.2:1 mol ratio OH/NCO groups to prevent dust attraction and improve weather resistance. Thus, a 50-.mu. film from 95:5 PVC-Levaprene 450 blend contg. a polymeric plasticizer 20, a Ba-Zn stabilizer 1, Tinuvin 327 1.2, and a lubricant 0.3 phr was coated with a mixt. of a soln. of a copolymer (mol. wt. 32,000, OH value 48) from chlorotrifluoroethylene 50, cyclohexyl vinyl ether 15, iso-Bu vinyl ether 25, and hydroxybutyl vinyl ether 10% and hexamethylene diisocyanate at 1:1 mol ratio OH/NCO to a thickness of .apprx.10 .mu. (dry) to give a product exhibiting retention of light transmittance after 2 yr of outdoor exposure 82% and retention of UV absorber after 2500 h in a weatherometer 90%, compared with 50% and 70%, resp., for an uncoated film.

International Patent Classification

International Patent Classification, Main

B32B027-40

International Patent Classification, Secondary

C08J007-04

Document Type

Patent

Language

Japanese

Supplementary Indexing

chlorotrifluoroethylene copolymer coating PVC film; cyclohexyl vinyl ether copolymer coating; isobutyl vinyl ether copolymer coating; hydroxybutyl vinyl ether copolymer coating; ethylene

Title

Radiation-curable coating compositions

Patent Assignee

Dainichiseika Color and Chemicals Mfg. Co., Ltd., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN

JKXXAF

Patent Information

JP 60094468 A2 850527 Showa

Application Information

JP 83-202804 831031

Abstract

The title compns., flexible and scratch-resistant, contain 60-99.9 parts radiation curable monomer or oligomer mixt. (5-100% with \geq 3 functional groups) and 0.1-40 parts fluoropolymer powder or beads. Thus, a mixt. of TLP 10F1 (PTFE) [9002-84-0] (particle diam. 8-16 μ) 20, difunctional urethane acrylate (mol. wt. 1500-2000) 40, trimethylolpropane trimethacrylate (I) 20, and N-vinylpyrrolidone 20 parts (viscosity 500 cP at 25°) was coated on a PVC flooring sheet to 40 μ . and electron beam-cured (50 Mrad) in 3 s to give a matte, semitransparent layer with Taber abrasion 2.5 mg (1000 cycles, 500 g), compared with 12 mg with tripropylene glycol dimethacrylate in place of I.

International Patent Classification

International Patent Classification, Main

C09D005-00

International Patent Classification, Secondary

C08J007-04; C09D003-58; C09D003-727

Document Type

Patent

Language

Japanese

Supplementary Indexing

urethane acrylate coating radiocurable; PTFE coating radiocurable; trimethylolpropane methacrylate coating radiocurable; electron beam curing coating; crosslinking radiochem coating

IT Related Fields

Indexing

Concept Group

Concept Heading

Electron beam, chemical and physical effects

Title

Outdoor covering materials

Patent Assignee

Mitsui Toatsu Chemicals, Inc., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN

JKXXAF

Patent Information

JP 58057954 A2 830406 Showa

Application Information

JP 81-156142 811002

Abstract

A plastic sheet is coated with a membrane-forming mixt. of a F-contg. polymer and a polymer binder to give a durable outdoor covering material (e.g., for a greenhouse) with good light transmission. Thus, a 0.1-mm-thick flexible PVC [9002-86-2] sheet was coated with a AcNMe₂ soln. of 8 parts poly(vinylidene fluoride) [24937-79-9] and 2 parts poly(Me methacrylate) [9011-14-7] to 3 .mu., and had 80% light transmission by JIS K 6714 after 1 yr outdoor weathering, compared with 60% without the coating.

International Patent Classification

B32B027-06; B32B027-30

Document Type

Patent

Language

Japanese

Supplementary Indexing

polyvinylidene fluoride polymethacrylate coating PVC; durability light transmission PVC film

IT Related Fields

Indexing

Concept Group

Concept Heading

Glass fibers, uses and miscellaneous

Role

USES (Uses)

Text Modification

(acrylic polymers reinforced by, for transparent outdoor coverings, fluoropolymer coatings
for)

IT Related Fields

Title

PVC and fluoropolymer-based laminate and its manufacture

Inventor Name

Kawashima, Chikashi; Yoshida, Seiichi; Koga, Yasubumi

Patent Assignee

Central Glass Co., Ltd., Japan

Publication Source

Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN

JKXXAF

Patent Information

JP 02274534 A2 901108 Heisei

Application Information

JP 89-97220 890417

Abstract

Title laminates, useful as covering sheets, are prep'd. by applying PVC film (or paste) over polyester cloth and laminating with fluoropolymer film (or coating with the polymer soln.) on 1 side after applying poly(Me methacrylate) (I) adhesive. A laminate, prep'd. by applying I (SC 462) over each side of PVC-sandwiched polyester cloth (E5) and coating with vinylidene fluoride-chlorotrifluoroethylene graft copolymers in DMF soln. on 1 side, had satisfactory spots prevention property.

International Patent Classification

International Patent Classification, Main

B32B027-02

International Patent Classification, Secondary

B05D001-18

Document Type

Patent

Language

Japanese

Supplementary Indexing

PVC laminated polyester covering material; fluoropolymer laminated PVC covering material; spot prevention fluoropolymer laminate

IT Related Fields

Indexing

Concept Group

Concept Heading

Fluoropolymers